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EXAMINER
LI, SHI K

ART UNIT	PAPER NUMBER
2613	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/754,931	SADANANDA, SANTOSH KUMAR	
	Examiner	Art Unit	
	Shi K. Li	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-88* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-88* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 5/7/2007
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33,35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. (P. Ho et al., "A Novel Distributed Control Protocol in Dynamic Wavelength-Routed Optical Networks", IEEE Communications Magazine, November 2002) in view of Smith et al. (U.S. Patent 7,171,124 B2).

Regarding claims 1, 33, 60, 66, 70 and 76, Ho et al. teaches in FIG. 4 an optical network including a plurality of nodes. Ho et al. teaches on page 39, right col. partially adaptive routing wherein each source node is provided with a routing table (equivalent to database of instant claim), in which paths to all its destinations are stored. Ho et al. teaches on page 38, right col., last paragraph wavelength continuity constraint for each lightpath, i.e., the lightpaths represent conversion free connectivity. When a connection request arrives, the source node selects a path from all the available ones from a routing table. Ho et al. teaches on page 39, right col., second paragraph message scheme for updating the routing table. Ho et al. teaches to send probe messages along potential destinations, i.e., only nodes reachable through said conversion free connectivity. The difference between Ho et al. and the claimed invention is that Ho et al. does not teach grouping paths based on common destination nodes. Smith et al. teaches in FIG. 5B and FIG. 6B grouping paths with common destination nodes for evaluating and selecting the best path for routing. One of ordinary skill in the art would have been motivated to combine the teaching of Smith et al. with the optical network of Ho et al. because when selecting the best path

to a destination, it is necessary to compare and evaluate them to make a decision. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to group paths with common destination nodes, as taught by Smith et al., in the optical network of Ho et al. because when selecting the best path to a destination, it is necessary to compare and evaluate them to make a decision.

Regarding claims 2 and 77, Ho et al. teaches on page 40, left col., first paragraph to use customer-defined cost function and link state metrics to select one of the feasible lightpaths for a connection request.

Regarding claims 3-4 and 35-36, Ho et al. teaches on page 38, right col., first paragraph lightpaths.

Regarding claim 6, Ho et al. teaches on page 38, right col., last paragraph wavelength continuity which implies that the wavelengths available on each of said available paths are those wavelengths common to all of the interconnecting links of that path.

Regarding claims 7, 39, 65 and 78-79, Ho et al. teaches on page 39, right col., last paragraph to page 40, left col., first paragraph to select a lightpath and a wavelength for a connection request.

Regarding claims 11 and 43, Ho et al. teaches on page 40, left col., first paragraph to select a lightpath for a connection request.

Regarding claim 12, Ho et al. teaches a distributed architecture where each node builds and maintains its database.

Regarding claim 14, Ho et al. teaches on page 40, left col., first paragraph to use customer-defined cost function and link state metrics to select one of the feasible lightpaths for a

connection request. Ho et al. teaches on page 39, right col., last paragraph to page 40, left col., first, paragraph to select a lightpath and a wavelength for a connection request.

Regarding claims 16-17, Ho et al. teaches on page 38, right col., first paragraph lightpaths.

Regarding claim 20, Ho et al. teaches on page 39, right col., last paragraph to page 40, left col., first paragraph to select a lightpath and a wavelength for a connection request.

Regarding claims 24-25, Ho et al. teaches on page 40, left col., first paragraph to select a lightpath for a connection request.

Regarding claim 26-27, Ho et al. teaches a distributed architecture where each node builds and maintains its database.

Regarding claim 67, Ho et al. teaches on page 40, left col., first paragraph various wavelength selection algorithms. For example, least-used method sorts wavelength based on how often the wavelength is used and selects the least-used, i.e., the first, wavelength in the sorted list.

Regarding claims 73-74, Ho et al. teaches on page 38, right col., first paragraph lightpaths which is the same as optical circuit (see, e.g., Battou et al, U.S. Patent 7,013,084 B2, col. 31, line 51).

3. Claims 5, 18-19, 34 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. and Smith et al. as applied to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79 above, and further in view of Deo ("Graph Theory with Applications to Engineering and Computer Science" by Narsingh Deo, Prentice-Hall, 1974, pp. 20-21).

Ho et al. and Smith et al. have been discussed above in regard to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79. Smith et al. teaches in col. 7, line 60 that path cost is the sum of the costs of nodes and links that constitute the path. As additional evidence, Deo teaches in page 20, third paragraph to represent a path as a series of nodes and the interconnecting link over which the path travels, e.g., the path of FIG. 2-8(b) is represented as "v_1 a v_2 b v_3 d v_4". One of ordinary skill in the art would have been motivated to combine the teaching of Deo with the modified optical network of Ho et al. and Smith et al. because graph theory is used in computer programming for solving network related programs. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to represent a path as a series of nodes and the interconnecting link over which the path travels, as taught by Deo, in the modified optical network of Ho et al. and Smith et al. because graph theory is used in computer programming for solving network related programs.

4. Claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72, 80-86 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. and Smith et al. as applied to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79 above, and further in view of Ho et al.2 (P. Ho et al., "A Framework for Service-Guaranteed Shared Protection in WDM Mesh Networks", IEEE Communications Magazine, February 2002).

Ho et al. and Smith et al. have been discussed above in regard to claims 1-4, 6-7, 11-i2, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79. Regarding claims 8, 21, 40, 45, 62, 68, 71, 80, 82 and 84, the difference between Ho et al. and Smith et al. and the claimed invention is that Ho et al. and Smith et al. do not teach protection. Ho et al.2 teaches on page 99, left col., second paragraph path-based protection such that when a fault occurs on the

working path, the source activates the configuration of the nodes along the protection path and switches traffic over from the working path to the protection path. Ho et al.2 teaches on page 98, left col., first paragraph node disjoint lightpaths for working and protection paths. One of ordinary skill in the art would have been motivated to combine the teaching of Ho et al.2 with the modified optical network of Ho et al. and Smith et al. because protection scheme protects against fault and provides continuous service to customers. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include protection scheme, as taught by Ho et al.2, in the modified optical network of Ho et al. and Smith et al. because protection scheme protects against fault and provides continuous service to customers.

Regarding claims 9, 22, 41, 46, 48, 63, 69, 72, 81, 83 and 88, Ho et al.2 teaches on page 98, left col., first paragraph node disjoint lightpaths for working and protection paths.

Regarding claims 10, 23, 42, 47, 49 and 64, node-disjoint implies link-disjoint.

Regarding claims 50-51 and 85-86, Ho et al. teaches lightpaths which is the same as optical circuits (see, e.g., Battou et al, U.S. Patent 7,013,084 B2, col. 31, line 51).

Regarding claim 53-54, Ho et al. teaches on page 39, right col., last paragraph to page 40, left col., first paragraph to select a lightpath and a wavelength for a connection request.

Regarding claim 55, Ho et al. teaches a distributed architecture where each node builds and maintains its database.

5. Claims 13 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. and Smith et al. as applied to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79 above, and further in view of Jukan et al. (A. Jukan et al.,

"Constraint-Based Path Selection Methods for On-Demand Provisioning in WDM Networks", IEEE INFOCOM, 2002).

Ho et al. and Smith et al. have been discussed above in regard to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79. The difference between Ho et al. and Smith et al. and the claimed invention is that Ho et al. and Smith et al. do not teach a path information message for probing potential paths. Jukan et al. teaches on page 831, right col., distributed discovery of wavelength paths (DWP) where a path information message is sent to collect path information. One of ordinary skill in the art would have been motivated to combine the teaching of Jukan et al. with the modified optical network of Ho et al. and Smith et al. because DWP is simple and gives better performance than shortest path as illustrated in FIG. 3 of Jukan et al. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use path information message and DWP for finding available paths, as taught by Jukan et al., in the modified optical network of Ho et al. and Smith et al. because DWP is simple and gives better performance than shortest path method.

6. Claims 15 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al. and Deo as applied to claims 5, 18-19, 34 and 37-38 above, and further in view of Date ("An Introduction to Database System" by C. J. Date, Addison-Wesley 1986, pp. 3-21, 29-41 and 45-80).

Ho et al., Smith et al. and Deo have been discussed above in regard to claims 5, 18-19, 34 and 37-38. The difference between Ho et al., Smith et al. and Deo and the claimed invention is that Ho et al., Smith et al. and Deo do not teach database structure such as entries. However, database structures are well known in the art. For example, Date teaches on page 10 the concept

of entity which is equivalent to entry of instant claim. Date teaches in Chapter 2 and Chapter 3 architecture and organization of information in database. One of ordinary skill in the art would have been motivated to combine the teaching of Date with the modified optical network of Ho et al., Smith et al. and Deo and organize information based on destination because destination is a key, together with other parameters such as constraints, provided by the user when specifying a lightpath. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to organize information based on destinations, as taught by Date, in the modified optical network of Ho et al., Smith et al. and Deo and organize information based on destination because destination is a key, together with other parameters such as constraints, provided by the user when specifying a lightpath.

7. Claims 30, 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. and Smith et al. as applied to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79 above, and further in view of Moy (J. Moy, "OSPF Version 2", RFC 2328, IETF, April 1998).

Ho et al. and Smith et al. have been discussed above in regard to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79. The difference between Ho et al. and Smith et al. and the claimed invention is that Ho et al. and Smith et al. do not teach using OSPF. Ho et al. teaches on page 39, let~ col., first paragraph routing using link state information. It is well known in the art that there are two standards for link state routing, namely IS-IS and OSPF. Moy teaches OSPF which is an IETF protocol for exchanging link state information among nodes in a network and calculating network topology and finding shortest path base on link state database. One of ordinary skill in the art would have been motivated to

combine the teaching of Moy with the modified optical network of Ho et al. and Smith et al. because OSPF of Moy is widely deployed in the Internet and using OSPF of Moy ensures compatibility with other popular products that have already deployed in the field. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use OSPF, as taught by Moy, in the modified optical network of Ho et al. and Smith et al. because OSPF of Moy is widely deployed in the Internet and using OSPF of Moy ensures compatibility with other popular products that have already deployed in the field.

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. and Smith et al. as applied to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79 above, and further in view of Pulkkinen et al. (U.S. Patent Application Pub. 2003/0172356 A1).

Ho et al. and Smith et al. has been discussed above in regard to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79. The difference between Ho et al. and Smith et al. and the claimed invention is that Ho et al. and Smith et al. do not teach a centralized management system. However, centralized management of distributed database is well known in the art. For example, Pulkkinen et al. teaches centralized management of a distributed database (see paragraph [0012]. One of ordinary skill in the art would have been motivated to combine the teaching of Pulkkinen et al. with the modified WDM network of Ho et al. and Smith et al. because centralized management coordinates the local databases to ensure their consistency and provides powerful computation power that is shared among local databases. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a centralized management system for maintaining local database of

each node, as taught by Pulkkinen et al., in the modified WDM network of Ho et al. and Smith et al. because centralized management coordinates the local databases to ensure their consistency and provides powerful computation power that is shared among local databases.

9. Claims 52 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al. and Ho et al.2 as applied to claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72, 80-86 and 88 above, and further in view of Deo ("Graph Theory with Applications to Engineering and Computer Science" by Narsingh Deo, Prentice-Hall, 1974, pp. 20-21).

Ho et al., Smith et al. and Ho et al.2 have been discussed above in regard to claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72, 80-86 and 88. Smith et al. teaches in col. 7, line 60 that path cost is the sum of the costs of nodes and links that constitute the path. As additional evidence, Deo teaches on page 20, third paragraph to represent a path as a series of nodes and the interconnecting link over which the path travels, e.g., the path of FIG. 2-8(b) is represented as "v_1 a v_2 b v_3 d v_4". One of ordinary skill in the art would have been motivated to combine the teaching of Deo with the modified optical network of Ho et al., Smith et al. and Ho et al.2 because graph theory is used in computer programming for solving network related programs. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to represent a path as a series of nodes and the interconnecting link over which the path travels, as taught by Deo, in the modified optical network of Ho et al., Smith et al. and Ho et al.2 because graph theory is used in computer programming for solving network related programs.

10. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al. and Ho et al.2 as applied to claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72,

80-86 and 88 above, and further in view of Jukan et al. (A. Jukan et al., "Constraint-Based Path Selection Methods for On-Demand Provisioning in WDM Networks", IEEE INFOCOM, 2002).

Ho et al., Smith et al. and Ho et al.2 have been discussed above in regard to claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72, 80-86 and 88. The difference between Ho et al., Smith et al. and Ho et al.2 and the claimed invention is that Ho et al., Smith et al. and Ho et al.2 do not teach a path information message for probing potential paths. Jukan et al. teaches on page 831, right col., distributed discovery of wavelength paths (DWP) where a path information message is sent to collect path information. One of ordinary skill in the art would have been motivated to combine the teaching of Jukan et al. with the modified optical network of Ho et al., Smith et al. and Ho et al.2 because DWP is simple and gives better performance than shortest path as illustrated in FIG. 3 of Jukan et al. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use path information message and DWP for finding available paths, as taught by Jukan et al., in the modified optical network of Ho et al., Smith et al. and Ho et al.2 because DWP is simple and gives better performance than shortest path method.

11. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al. and Ho et al.2 as applied to claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72, 80-86 and 88 above, and further in view of Moy (J. Moy, "OSPF Version 2", RFC 2328, IETF, April 1998).

Ho et al., Smith et al. and Ho et al.2 have been discussed above in regard to claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72, 80-86 and 88. The difference between Ho et al., Smith et al. and Ho et al.2 and the claimed invention is that Ho et al., Smith et al. and Ho et

al.2 do not teach using OSPF. Ho et al. teaches on page 39, left col., first paragraph routing using link state information. It is well known in the art that there are two standards for link state routing, namely IS-IS and OSPF. Moy teaches OSPF which is an IETF protocol for exchanging link state information among nodes in a network and calculating network topology and finding shortest path base on link state database. One of ordinary skill in the art would have been motivated to combine the teaching of Moy with the modified optical network of Ho et al., Smith et al. and Ho et al.2 because OSPF of Moy is widely deployed in the Internet and using OSPF of Moy ensures compatibility with other popular products that have already deployed in the field. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use OSPF, as taught by Moy, in the modified optical network of Ho et al., Smith et al. and Ho et al.2 because Moy is widely deployed in the Internet and using OSPF of Moy ensures compatibility with other popular products that have already deployed in the field.

12. Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. and Smith et al. as applied to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70, 73-74 and 76-79 above, and further in view of Shami et al. (A. Shami et al., "Performance Evaluation of Two GMPLS-Based Distributed Control and Management Protocols for Dynamic Lightpath Provisioning in Future IP Networks", IEEE, 2002).

Ho et al. and Smith et al. have been discussed above in regard to claims 1-4, 6-7, 11-12, 14, 16-17, 20, 24-27, 33, 35-36, 39, 43, 60, 65-67, 70 and 73-74. The difference between Ho et al. and Smith et al. and the claimed invention is that Ho et al. and Smith et al. do not teach to keep track of the wavelength status. Shami et al. teaches in p. 2290, right col., second paragraph that each node of a WDM network has a controller for maintaining status of every wavelength on

every link emerging from that node. One of ordinary skill in the art would have been motivated to combine the teaching of Shami et al. with the modified WDM network method of Ho et al. and Smith et al. because such link status and wavelength assignment information is critical for controlling the cross-connect and for determining available wavelengths that can be assigned for new paths. Thus it would have been obvious to one Of ordinary skill in the art at the time the invention was made to include a link channel set for maintaining status of every wavelength on every link emerging from that node, as taught by Shami et al., in the modified WDM network method of Ho et al. and Smith et al. because such link status and wavelength assignment information is critical for controlling the cross-connect and for determining available wavelengths that can be assigned for new paths.

13. Claim 87 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al. and Ho et al.2 as applied to claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72, 80-86 and 88 above, and further in view of Shami et al. (A. Shami et al., "Performance Evaluation of Two GMPLS-Based Distributed Control and Management Protocols for Dynamic Lightpath Provisioning in Future IP Networks", IEEE, 2002).

Ho et al., Smith et al. and Ho et al.2 have been discussed above in regard to claims 8-10, 21-23, 40-42, 45-51, 53-55, 62-64, 68-69, 71-72, 80-86 and 88. The difference between Ho et al., Smith et al. and Ho et al.2 and the claimed invention is that Ho et al., Smith et al. and Ho et al.2 do not teach to keep track of the wavelength status. Shami et al. teaches in p. 2290, right col., second paragraph that each node of a WDM network has a controller for maintaining status of every wavelength on every link emerging from that node. One of ordinary skill in the art would have been motivated to combine the teaching of Shami et al. with the modified optical

network of Ho et al., Smith et al. and Ho et al.2 because such link status and wavelength assignment information is critical for controlling the cross-connect and for determining available wavelengths that can be assigned for new paths. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a link channel set for maintaining status of every wavelength on every link emerging from that node, as taught by Shami et al., in the modified optical network of Ho et al., Smith et al. and Ho et al.2 because such link status and wavelength assignment information is critical for controlling the cross-connect and for determining available wavelengths that can be assigned for new paths.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1, 3-29, 32,35-43,45-57, 59-60, 62-76 and 84-88 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6-7 and 10 of U.S. Patent No. 7,283,741. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 6-7 and 10 of patent 7,283,741 contains limitations of claims 1, 3-29, 32,35-43,45-57, 59-60, 62-76 and 84-88 of instant application. For example, regarding claim 1 of instant application, claim 1 of patent '741 teaches access node in a wavelength division multiplexing optical network with a database organized by the destination nodes and paths connecting nodes. The access node contains start up module and connectivity module for discovering possible paths to destinations.

Response to Arguments

16. Applicant's arguments filed 2 August 2007 have been fully considered but they are not persuasive.

The Applicant argues that neither Ho nor Smith teach or suggest a database of available paths groups by common destination node. The Examiner disagrees. Smith et al. teaches in FIG.

1 a wavelength division multiplexing optical network with a plurality of access nodes A, B, C, D, E and Z, Smith et al. teaches in FIG. 5B and FIG. 6B grouping paths with common destination node for evaluating and selecting the best path for routing. FIG. 5B groups five (5) possible paths from access node A to destination Z. All these paths have a common destination Z. Smith et al. further teaches evaluating the performance and cost of these paths and select a best path for routing demand from the source to the destination.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl
16 October 2007

Shi K. Li
Primary Patent Examiner